

November 16, 2018

Polarization through the Prism of the Wage Growth Tracker (Take Two)

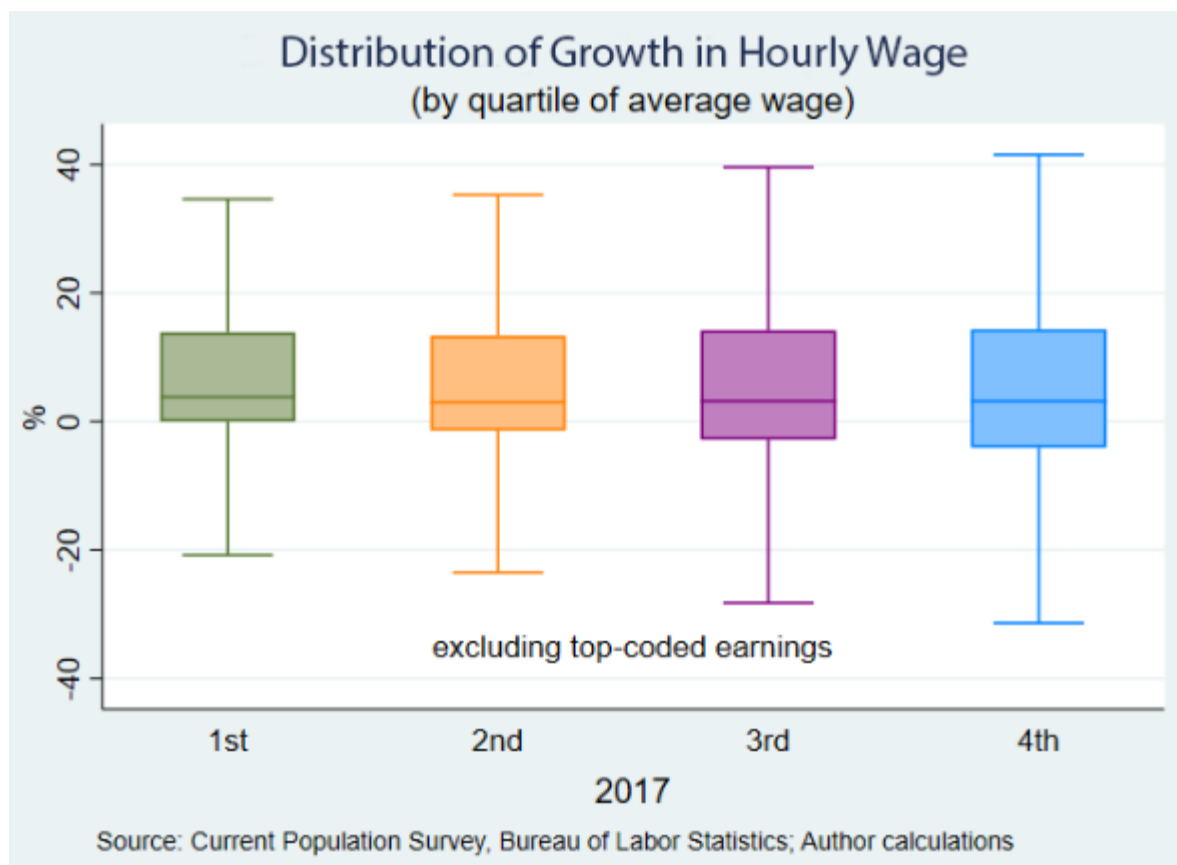
In a previous *macroblog* [post](#), I thought I had discovered an interesting differential between the wage growth of middle-wage earners and that of low/high-paid workers. It turns out that what I actually discovered is that my programming skills could be improved upon. The following is an update to the post, written after correcting the coding error. Although there is no obvious wage growth polarization story, the wages of low-wage workers are currently rising at a faster median rate than for other workers.

Updated Post:

One of the most frequent questions we receive about the Atlanta Fed's [Wage Growth Tracker](#) (the median of year-over-year percent changes in individuals' hourly wage) is about the relationship between wage level and wage growth. For example, do high-wage earners also tend to experience greater wage growth?

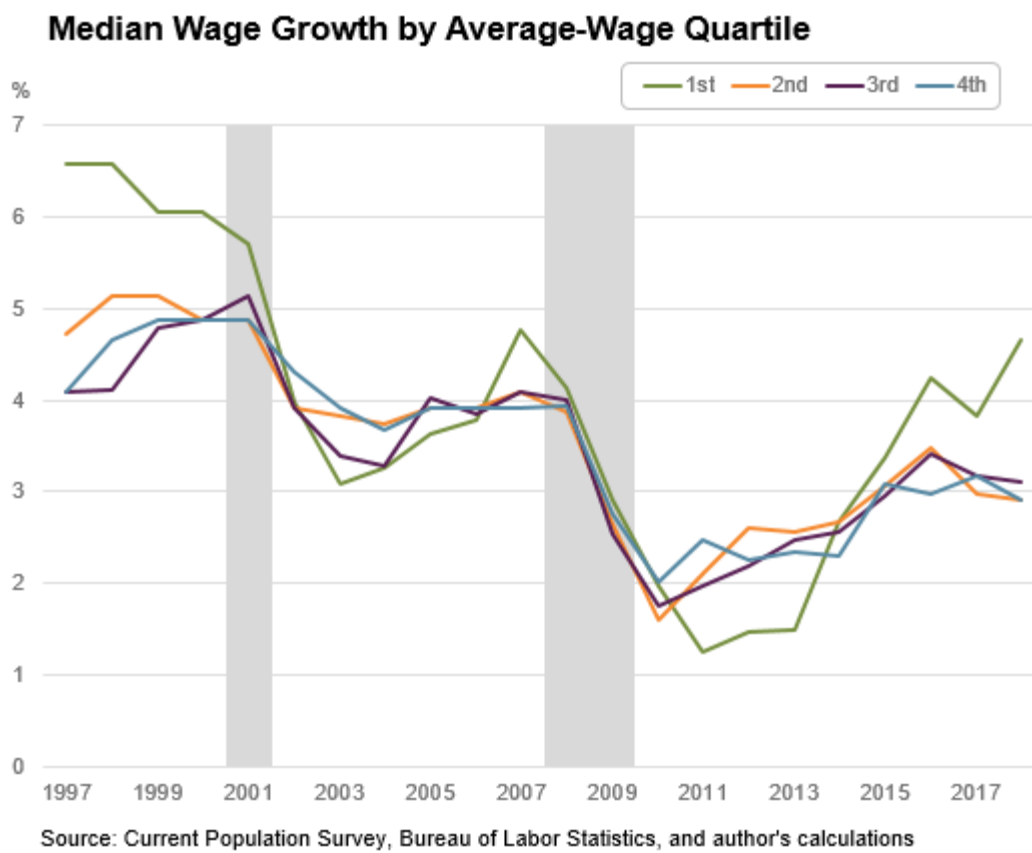
When looking at wage growth by wage level, whether you use the prior or current wage level as the reference point matters—a lot. If we looked at wage growth categorized by the prior year's wages, we would find higher median wage growth for low-wage earners than for high-wage earners. This is because some workers who earned low wages last year earn middle or high wages this year, and some of last year's high-wage workers earn middle or low wages this year. If we instead categorized people based on current-year wages, we would see exactly the opposite: lower median wage growth for low-wage workers than for high-wage workers (see [here](#) for more discussion).

One way to lessen this wage-level base effect is to categorize an individual's wage growth according to their average wage across the two years. The following chart shows this categorization for the 2016–17 wage growth distribution of all workers in the Wage Growth Tracker data. (Note that since 1997, the annual salary for people whose earnings are only reported on a weekly basis is top-coded at \$150,000 a year—these masked observations are excluded from the analysis). In the chart, the first quartile depicts the lowest-paid 25 percent of workers based on their average 2016–17 hourly wage, and so on. The center line of the box for each quartile is the median of that group's wage growth distribution, and the lower and upper boundaries of the box are the 25th and 75th percentiles, respectively. The outer lines are the thresholds for outlier observations (see [here](#) for the calculation.)



The chart shows that the wage growth distribution across the average-wage quartiles does, in fact, differ. In particular, the median wage growth for the lowest-paid workers is higher than the median for other types of workers. The median wage growth from 2016 to 2017 for the lowest quartile is 3.8 percent, 3.0 percent for the second quartile, and 3.2 percent for the third and fourth quartiles.

However, the pattern of relatively higher median wage growth for low-wage workers is not uniform over time. This difference is apparent in the following chart, which plots median wage growth over time for each average-wage quartile.



As the chart shows, median wage growth of low-wage workers (the green line, representing the first quartile) currently exceeds that of higher-wage workers, but it was below the median for higher-paid workers in the wake of the Great Recession. This pattern is consistent with both the severity of the recession and what we have been hearing more recently about [emerging shortages of low-skilled workers](#). It also appears that the median wage growth of the highest-paid workers (the blue line, representing the fourth quartile) slows by a bit less than that of other workers during downturns but is otherwise not much different than for workers in the middle of the wage distribution.

So, relative to the incorrect charts I had in the previous version of this post, there is no obvious wage growth polarization story here. The wages of low-wage workers are currently rising at a faster median rate than for other workers, and these other workers are experiencing broadly similar median wage growth.



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